



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/511,325	10/15/2004	Tsutomu Yoshitake	Q84259	9221

23373 7590 11/01/2006  
SUGHRUE MION, PLLC  
2100 PENNSYLVANIA AVENUE, N.W.  
SUITE 800  
WASHINGTON, DC 20037

EXAMINER

LEWIS, BEN

ART UNIT PAPER NUMBER

1745

DATE MAILED: 11/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/511,325

Applicant(s)

YOSHITAKE ET AL.

Examiner

Ben Lewis

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10/15/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date See Continuation Sheet.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_.

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/15/04, 4/18/06, 8/10/06, 12/5/05.

## **DETAILED ACTION**

### **Pendency of Claims**

Original claims 1-20 were filed in this national stage application. However, applicant cancelled claims 1-18 in the preliminary amendment filed on 10/15/2004 listing claims 1-18 as cancelled and claims 19-20 as new. For the purposes of prosecution, claims 19 and 20 are treated as amended claims.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 19-27 and 29-32 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "ordinary temperature" is not defined by its claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably appraised of the scope of the invention.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 19 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida et al. (U.S. Patent No. 6,057,051) in view of Johnson (U.S. Patent No. 6,808,833 B2).

With respect to claims 19 and 28, Uchida et al. disclose a miniaturized fuel cell assembly (title).

With respect to a heat-producing section and a heat-dissipating section arranged adjacent to the heat producing section, Uchida et al. teach that the hydrogen storage unit **205** "heat-dissipating section" is heated by the air discharged from the fuel cell body **204** "heat producing section" (Col 8 lines 24-30).

With respect to a fuel supply section Uchida et al. teach that the cell device **2** includes a cell device casing **3** constituting a shell of the cell device **2**. Mounted within the cell device casing **3** are a fuel cell body **4**, a hydrogen storage unit **5** storing hydrogen to be used in the fuel cell body **4**, hydrogen supply means **6a** for feeding the hydrogen from the hydrogen storage unit **5** to the fuel cell body (Col 5 lines 54-67).

Art Unit: 1745

With respect to a fuel supply section being arranged in the heat-dissipating section Uchinda et al. teach that the hydrogen supply means **6** comprises a connecting portion **6a** provided at one end thereof and detachably connected to the hydrogen storage unit **5** to receive the hydrogen in the hydrogen storage unit **5** without leakage, (Col 6 lines 10-35) (See FIGS. 7, 8 and 9).

With respect to a flow-rate-control section, Uchida et al. teach that the fuel cell device comprises a control unit for controlling a flow of the hydrogen from the hydrogen storage unit to control an operation of a fuel cell in the fuel cell body (Col 3 lines 4-15).

Uchida et al. does not specifically teach the fuel being a liquid. However, Johnson discloses a fuel supply for a fuel cell (title) wherein the fuel container **24** is configured to hold a liquid fuel supply, such as a borohydride or methanol solution, and is typically constructed from a material inert to the fuel solution. Fuel supply **20** also includes a fuel outlet **28** configured to pass fuel out of fuel storage area **26** (Col 2 lines 45-60). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the liquid fuel system of Johnson into the fuel cell system of Uchida et al because Johnson teach that these fuels "liquid" are relatively safe and easy to use and to store at room temperature, they may be used in disposable or rechargeable fuel supplies (Col 1 lines 55-64).

### ***Conclusion***

Art Unit: 1745

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben Lewis whose telephone number is 571-272-6481.

The examiner can normally be reached on 8:30am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's Trainer, Susy Tsang-Foster can be reached on 571-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ben Lewis



Patent Examiner  
Art Unit 1745

**SUSYTSANG-FOSTER  
PRIMARY EXAMINER**